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=> FIL HOME
=> s (polymer?(5l)hydrophil?)
L1      149289 (POLYMER?(5L) HYDROPHIL?)

=> s protein and (L1 or hydrogel? or water) and (biocompati? or collagen or albumin
or fibrin or fibrinogen)
L2      71109 PROTEIN AND (L1 OR HYDROGEL? OR WATER) AND (BIOCOMPATI? OR COLLE
GEN OR ALBUMIN OR FIBRIN OR FIBRINOGEN)

=> s l2 and (visualiz? agent or photopolymer?)
L3      710 L2 AND (VISUALIZ? AGENT OR PHOTOPOLYMER?)

=> s l3 and (biodegrad? hydrogel?)
L4      55 L3 AND (BIODEGRAD? HYDROGEL?)

=> s l4 and (crosslink? or cross-link? or cross link?(w)polyethylen glycol or PEG)
L5      55 L4 AND (CROSSLINK? OR CROSS-LINK? OR CROSS LINK?(W) POLYETHYELE
N GLYCOL OR PEG)

=> s l5 and (electrophil? or nucleophil?)
L6      25 L5 AND (ELECTROPHIL? OR NUCLEOPHIL?)

=> s l5 and (dye or blue color or green color or methylene blue or indocyanine
green)
L7      36 L5 AND (DYE OR BLUE COLOR OR GREEN COLOR OR METHYLENE BLUE OR
INDOCYANINE GREEN)

=> s l7 and (kit or packaged device)
L8      8 L7 AND (KIT OR PACKAGED DEVICE)

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9      8 DUP REM L8 (0 DUPLICATES REMOVED)

=> d l9 1-8 bib ab

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L9      ANSWER 1 OF 8  USPATFULL on STN
AN      2003:299937  USPATFULL
TI      Microgel particles for the delivery of bioactive materials
IN      Frechet, Jean M.J., Oakland, CA, UNITED STATES
Murthy, Niren, Berkeley, CA, UNITED STATES
PI      US 2003211158      A1  20031113
AI      US 2003-401496      A1  20030328 (10)
PRAI    US 2002-368576P      20020329 (60)
DT      Utility
FS      APPLICATION
LREP    LAWRENCE BERKELEY NATIONAL LABORATORY, ONE CYCLOTRON ROAD, MAIL STOP
90B, UNIVERSITY OF CALIFORNIA, BERKELEY, CA, 94720
CLMN    Number of Claims: 26
ECL     Exemplary Claim: 1
DRWN    17 Drawing Page(s)
LN.CNT  2132
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Novel microgels, microparticles and related polymeric
materials capable of delivering bioactive materials to cells for use as
vaccines or therapeutic agents. The materials are made using a
crosslinker molecule that contains a linkage cleavable under
mild acidic conditions. The crosslinker molecule is
exemplified by a bisacryloyl acetal crosslinker. The new
materials have the common characteristic of being able to degrade by
acid hydrolysis under conditions commonly found within the endosomal or
lysosomal compartments of cells thereby releasing their payload within
the cell. The materials can also be used for the delivery of
therapeutics to the acidic regions of tumors and sites of inflammation.

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L9 ANSWER 2 OF 8 USPATFULL on STN
AN 2003:207837 USPATFULL
TI Coadministration of transport **protein** with conjugated
cobalamin to deliver agents
IN Collins, Douglas A., Rochester, MN, UNITED STATES
PI US 2003144198 A1 20030731
AI US 2002-262318 A1 20020930 (10)
PRAI US 2001-326183P 20010928 (60)
DT Utility
FS APPLICATION
LREP Sherry M. Knowles, King & Spalding, 45th Floor, 191 Peachtree Street,
N.E., Atlanta, GA, 30303
CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 3375
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cobalamin transport proteins are administered in combination with
cobalamin coupled to a diagnostic or pharmaceutically active agents to
increase the extent of absorption of the diagnostic or pharmaceutically
active agent. Cobalamin transport proteins include, but are not limited
to intrinsic factor, transcobalamin I, transcobalamin II and
transcobalamin III. The combination of the cobalamin or cobalamin
derivative with the cobalamin transport **protein** provides
enhanced cellular uptake.

L9 ANSWER 3 OF 8 USPATFULL on STN
AN 2003:181931 USPATFULL
TI Vascular sealing device and method of use
IN Ding, Ni, Plymouth, MN, UNITED STATES
PI US 2003125766 A1 20030703
AI US 2002-314552 A1 20021204 (10)
RLI Continuation of Ser. No. US 2000-498542, filed on 4 Feb 2000, GRANTED,
Pat. No. US 6547806
DT Utility
FS APPLICATION
LREP SHUMAKER & SIEFFERT, P. A., 8425 SEASONS PARKWAY, SUITE 105, ST. PAUL,
MN, 55125
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 8 Drawing Page(s)
LN.CNT 812
AB A collapsible medical device for use, e.g., as a vascular sealer. The
device includes a sheath adapted to be positioned such that a distal end
thereof is adjacent the opening. A mandrel is disposed within a lumen of
the sheath and is adapted to be positioned such that a distal length
thereof is adjacent the distal end of the sheath. A collapsible sealing
member comprises a fluid-impervious film carried by a plurality of
wires. The wires are attached to the mandrel and expand radially outward
therefrom. In one method of using such a device, the sealing member is
held in a collapsed position within the sheath. The sealing member is
advanced through the sheath and beyond the distal end thereof, whereby
the sealing member resiliently expands. The sealing member is positioned
against the inner wall of the blood vessel adjacent the opening, thereby
effecting a temporary seal of the opening. The sealant is introduced
into the tissue tract. After hardening, the sealing member is collapsed
within the sheath. The sheath the sealing member collapsed therein
(together with any existing introducer) are then withdrawn proximally
from the patient.

L9 ANSWER 4 OF 8 USPATFULL on STN
AN 2003:158898 USPATFULL
TI Adhesion barriers applicable by minimally invasive surgery and methods
of use thereof
IN Sawhney, Amarpreet S., Lexington, MA, UNITED STATES

PI US 2003108511 A1 20030612
AI US 2002-319308 A1 20021213 (10)
RLI Continuation-in-part of Ser. No. US 2001-10715, filed on 9 Nov 2001,
PENDING Continuation-in-part of Ser. No. US 1999-454900, filed on 3 Dec
1999, PENDING Continuation-in-part of Ser. No. US 2000-513491, filed on
21 Apr 2000, PENDING Division of Ser. No. US 1998-134198, filed on 14
Aug 1998, GRANTED, Pat. No. US 6179862
PRAI US 1998-110849P 19981204 (60)
US 2002-359236P 20020220 (60)
DT Utility
FS APPLICATION
LREP PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A., 4800 IDS CENTER, 80 SOUTH
8TH STREET, MINNEAPOLIS, MN, 55402-2100
CLMN Number of Claims: 49
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 2941

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biocompatible crosslinked polymers**, and
methods for their preparation and use with minimally invasive surgery
applicators are disclosed. The disclosure includes compositions and
methods for in situ formation of **hydrogels** using minimally
invasive surgical techniques.

L9 ANSWER 5 OF 8 USPATFULL on STN
AN 2003:17067 USPATFULL
TI Nitric oxide-producing **hydrogel** materials
IN West, Jennifer L, Pearland, TX, UNITED STATES
Masters, Kristyn Simcha, Northglenn, CO, UNITED STATES

PI US 2003012816 A1 20030116
AI US 2002-129418 A1 20020517 (10)
WO 2001-US27414 20010904
PRAI US 2000-9653406 20000901

DT Utility
FS APPLICATION
LREP JOHN S. PRATT, ESQ, KILPATRICK STOCKTON, LLP, 1100 PEACHTREE STREET,
SUITE 2800, ATLANTA, GA, 30309

CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 20 Drawing Page(s)
LN.CNT 1500

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels** releasing or producing NO, most preferably
polymerizable biodegradable hydrogels
capable of releasing physiological amounts of NO for prolonged periods
of time, are applied to sites on or in a patient in need of treatment
thereof for disorders such as restenosis, thrombosis, asthma, wound
healing, arthritis, penile erectile dysfunction or other conditions
where NO plays a significant role. The **polymeric** materials can
be formed into films, coatings, or microparticles for application to
medical devices, such as stents, vascular grafts and catheters. The
polymeric materials can also be applied directly to biological
tissues and can be **polymerized** in situ. The **hydrogels**
are formed of macromers, which preferably include biodegradable regions,
and have bound thereto groups that are released in situ to elevate or
otherwise modulate NO levels at the site where treatment is needed. The
macromers can form a homo or hetero-dispersion or solution, which is
polymerized to form a **hydrogel** material, that in the
latter case can be a semi-interpenetrating network or interpenetrating
network. Compounds to be released can be physically entrapped,
covalently or ionically bound to macromer, or actually form a part of
the **polymeric** material. The **hydrogel** can be formed
by ionic and/or covalent **crosslinking**. Other active agents,
including therapeutic, prophylactic, or diagnostic agents, can also be
included within the **polymeric** material.

L9 ANSWER 6 OF 8 USPATFULL on STN
AN 2003:16986 USPATFULL
TI **Biocompatible crosslinked polymers**
IN Pathak, Chandrashekhar P., Austin, TX, UNITED STATES
Sawhney, Amarpreet S., Lexington, MA, UNITED STATES
Edelman, Peter G., Franklin, MA, UNITED STATES
PA Incept LLC. (U.S. corporation)
PI US 2003012734 A1 20030116
AI US 2001-10715 A1 20011109 (10)
RLI Continuation-in-part of Ser. No. US 1999-147897, filed on 30 Aug 1999,
PENDING A 371 of International Ser. No. WO 1997-US16897, filed on 22 Sep
1997, UNKNOWN Continuation-in-part of Ser. No. US 1999-454900, filed on
3 Dec 1999, PENDING
PRAI US 1996-26526P 19960923 (60)
US 1997-39904P 19970304 (60)
US 1997-40417P 19970313 (60)
US 1998-110849P 19981204 (60)
DT Utility
FS APPLICATION
LREP PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A., 4800 IDS CENTER, 80 SOUTH
8TH STREET, MINNEAPOLIS, MN, 55402-2100
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 10 Drawing Page(s)
LN.CNT 2234

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biocompatible crosslinked polymers**, and
methods for their preparation and use, are disclosed in which the
biocompatible crosslinked polymers are
formed from **water** soluble precursors having electrophilic and
nucleophilic functional groups capable of reacting and
crosslinking in situ. Methods for making the resulting
biocompatible crosslinked polymers
biodegradable or not are provided, as are methods for controlling the
rate of degradation. The **crosslinking** reactions may be carried
out in situ on organs or tissues or outside the body. Applications for
such **biocompatible crosslinked polymers**
and their precursors include controlled delivery of drugs, prevention of
post-operative adhesions, coating of medical devices such as vascular
grafts, wound dressings and surgical sealants. Visualization agents may
be included with the **crosslinked polymers**.

L9 ANSWER 7 OF 8 USPATFULL on STN
AN 2003:101990 USPATFULL
TI Vascular sealing device and method of use
IN Ding, Ni, 4365 Juneau La., Plymouth, MN, United States 55446
PI US 6547806 B1 20030415
AI US 2000-498542 20000204 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jackson, Gary
LREP Shumaker & Sieffert, PA
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 802

AB A collapsible medical device for use, e.g., as a vascular sealer. The
device includes a sheath adapted to be positioned such that a distal end
thereof is adjacent the opening. A mandrel is disposed within a lumen of
the sheath and is adapted to be positioned such that a distal length
thereof is adjacent the distal end of the sheath. A collapsible sealing
member comprises a fluid-impervious film carried by a plurality of
wires. The wires are attached to the mandrel and expand radially outward
therefrom. In one method of using such a device, the sealing member is

held in a collapsed position within the sheath. The sealing member is advanced through the sheath and beyond the distal end thereof, whereby the sealing member resiliently expands. The sealing member is positioned against the inner wall of the blood vessel adjacent the opening, thereby affecting a temporary seal of the opening. The sealant is introduced into the tissue tract. After hardening, the sealing member is collapsed within the sheath. The sheath the sealing member collapsed therein (together with any existing introducer) are then withdrawn proximally from the patient.

L9 ANSWER 8 OF 8 USPATFULL on STN
AN 2002:92631 USPATFULL
TI Cobalamin compounds useful as cardiovascular agents and as imaging agents
IN Hogenkamp, Henricus P.C., Roseville, MN, UNITED STATES
PI US 2002049155 A1 20020425
AI US 2001-873142 A1 20010531 (9)
PRAI US 2000-208140P 20000531 (60)
US 2001-267782P 20010209 (60)
DT Utility
FS APPLICATION
LREP KING & SPALDING, 191 PEACHTREE STREET, N.E., ATLANTA, GA, 30303-1763
CLMN Number of Claims: 50
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 4521
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides cobalamin derivatives linked to a cardiovascular agent, as well as pharmaceutical compositions comprising the compounds and methods for using the compounds in treatment or diagnosis of a cardiovascular disease.
=> s 17 and (polymer?(w)coat?)
L10 10 L7 AND (POLYMER?(W) COAT?)

=> s 19 and l10
L11 2 L9 AND L10

=> d l11 1-2 bib ab

L11 ANSWER 1 OF 2 USPATFULL on STN
AN 2003:17067 USPATFULL
TI Nitric oxide-producing **hydrogel** materials
IN West, Jennifer L, Pearland, TX, UNITED STATES
Masters, Kristyn Simcha, Northglenn, CO, UNITED STATES
PI US 2003012816 A1 20030116
AI US 2002-129418 A1 20020517 (10)
WO 2001-US27414 20010904
PRAI US 2000-9653406 20000901
DT Utility
FS APPLICATION
LREP JOHN S. PRATT, ESQ, KILPATRICK STOCKTON, LLP, 1100 PEACHTREE STREET, SUITE 2800, ATLANTA, GA, 30309
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 20 Drawing Page(s)
LN.CNT 1500
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Hydrogels** releasing or producing NO, most preferably **polymerizable biodegradable hydrogels** capable of releasing physiological amounts of NO for prolonged periods of time, are applied to sites on or in a patient in need of treatment thereof for disorders such as restenosis, thrombosis, asthma, wound healing, arthritis, penile erectile dysfunction or other conditions where NO plays a significant role. The **polymeric** materials can be formed into films, coatings, or microparticles for application to

medical devices, such as stents, vascular grafts and catheters. The **polymeric** materials can also be applied directly to biological tissues and can be **polymerized** in situ. The **hydrogels** are formed of macromers, which preferably include biodegradable regions, and have bound thereto groups that are released in situ to elevate or otherwise modulate NO levels at the site where treatment is needed. The macromers can form a homo or hetero-dispersion or solution, which is **polymerized** to form a **hydrogel** material, that in the latter case can be a semi-interpenetrating network or interpenetrating network. Compounds to be released can be physically entrapped, covalently or ionically bound to macromer, or actually form a part of the **polymeric** material. The **hydrogel** can be formed by ionic and/or covalent **crosslinking**. Other active agents, including therapeutic, prophylactic, or diagnostic agents, can also be included within the **polymeric** material.

L11 ANSWER 2 OF 2 USPATFULL on STN
AN 2003:16986 USPATFULL
TI **Biocompatible crosslinked polymers**
IN Pathak, Chandrashekhar P., Austin, TX, UNITED STATES
Sawhney, Amarpreet S., Lexington, MA, UNITED STATES
Edelman, Peter G., Franklin, MA, UNITED STATES
PA Incept LLC. (U.S. corporation)
PI US 2003012734 A1 20030116
AI US 2001-10715 A1 20011109 (10)
RLI Continuation-in-part of Ser. No. US 1999-147897, filed on 30 Aug 1999,
PENDING A 371 of International Ser. No. WO 1997-US16897, filed on 22 Sep
1997, UNKNOWN Continuation-in-part of Ser. No. US 1999-454900, filed on
3 Dec 1999, PENDING
PRAI US 1996-26526P 19960923 (60)
US 1997-39904P 19970304 (60)
US 1997-40417P 19970313 (60)
US 1998-110849P 19981204 (60)
DT Utility
FS APPLICATION
LREP PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A., 4800 IDS CENTER, 80 SOUTH
8TH STREET, MINNEAPOLIS, MN, 55402-2100
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 10 Drawing Page(s)
LN.CNT 2234
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Biocompatible crosslinked polymers**, and
methods for their preparation and use, are disclosed in which the
biocompatible crosslinked polymers are
formed from **water** soluble precursors having electrophilic and
nucleophilic functional groups capable of reacting and
crosslinking in situ. Methods for making the resulting
biocompatible crosslinked polymers
biodegradable or not are provided, as are methods for controlling the
rate of degradation. The **crosslinking** reactions may be carried
out in situ on organs or tissues or outside the body. Applications for
such **biocompatible crosslinked polymers**
and their precursors include controlled delivery of drugs, prevention of
post-operative adhesions, coating of medical devices such as vascular
grafts, wound dressings and surgical sealants. Visualization agents may
be included with the **crosslinked polymers**.

=> d his

(FILE 'HOME' ENTERED AT 16:00:46 ON 05 MAY 2004)

FILE 'STNGUIDE' ENTERED AT 16:01:01 ON 05 MAY 2004

FILE 'HOME' ENTERED AT 16:01:07 ON 05 MAY 2004

FILE 'MEDLINE, CAPLUS, BIOSIS, BIOTECHDS, EMBASE, USPATFULL, WPIDS'
ENTERED AT 16:01:25 ON 05 MAY 2004

L1 149289 S (POLYMER?(5L)HYDROPHIL?)
L2 71109 S PROTEIN AND (L1 OR HYDROGEL? OR WATER) AND (BIOCOMPATI? OR CO
L3 710 S L2 AND (VISUALIZ? AGENT OR PHOTOPOLYMER?)
L4 55 S L3 AND (BIODEGRAD? HYDROGEL?)
L5 55 S L4 AND (CROSSLINK? OR CROSS-LINK? OR CROSS LINK?(W)POLYETHYE
L6 25 S L5 AND (ELECTROPHIL? OR NUCLEOPHIL?)
L7 36 S L5 AND (DYE OR BLUE COLOR OR GREEN COLOR OR METHYLENE BLUE O
L8 8 S L7 AND (KIT OR PACKAGED DEVICE)
L9 8 DUP REM L8 (0 DUPLICATES REMOVED)
L10 10 S L7 AND (POLYMER?(W)COAT?)
L11 2 S L9 AND L10

=> d l10 1-10 bib ab

L10 ANSWER 1 OF 10 USPATFULL on STN
AN 2003:127770 USPATFULL
TI Gels for encapsulation of biological materials
IN Hubbell, Jeffrey A., San Marino, CA, UNITED STATES
Pathak, Chandrashekhar P., Lexington, MA, UNITED STATES
Sawhney, Amarpreet S., Lexington, MA, UNITED STATES
Desai, Neil P., Los Angeles, CA, UNITED STATES
Hossainy, Syed F.A., San Carlos, CA, UNITED STATES
Hill-West, Jennifer L., Pasadena, CA, UNITED STATES
PI US 2003087985 A1 20030508
AI US 2001-910663 A1 20010719 (9)
RLI Continuation of Ser. No. US 1995-510089, filed on 1 Aug 1995, ABANDONED
Continuation-in-part of Ser. No. US 1992-958870, filed on 7 Oct 1992,
GRANTED, Pat. No. US 5529914 Continuation-in-part of Ser. No. US
1992-870540, filed on 20 Apr 1992, ABANDONED Continuation-in-part of
Ser. No. US 1995-379848, filed on 27 Jan 1995, GRANTED, Pat. No. US
5626863 Continuation of Ser. No. US 1993-22687, filed on 1 Mar 1993,
GRANTED, Pat. No. US 5410016 Continuation-in-part of Ser. No. US
1992-843485, filed on 28 Feb 1992, ABANDONED Continuation-in-part of
Ser. No. US 1994-336393, filed on 10 Nov 1994, GRANTED, Pat. No. US
5820882 Continuation of Ser. No. US 1990-598880, filed on 15 Oct 1990,
ABANDONED
DT Utility
FS APPLICATION
LREP LYON & LYON LLP, 633 WEST FIFTH STREET, SUITE 4700, LOS ANGELES, CA,
90071
CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 22 Drawing Page(s)
LN.CNT 3246
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides novel methods for the formation of
biocompatible membranes around biological materials using
photopolymerization of **water** soluble molecules. The
membranes can be used as a covering to encapsulate biological materials
or biomedical devices, as a "glue" to cause more than one biological
substance to adhere together, or as carriers for biologically active
species.

Several methods for forming these membranes are provided. Each of these
methods utilizes a **polymerization** system containing
water-soluble macromers, species which are at once
polymers and macromolecules capable of further
polymerization. The macromers are **polymerized** using a
photoinitiator (such as a **dye**), optionally a cocatalyst,
optionally an accelerator, and radiation in the form of visible or long
wavelength UV light. The reaction occurs either by suspension

polymerization or by interfacial **polymerization**. The **polymer** membrane can be formed directly on the surface of the biological material, or it can be formed on material which is already encapsulated.

L10 ANSWER 2 OF 10 USPATFULL on STN
AN 2003:17067 USPATFULL
TI Nitric oxide-producing **hydrogel** materials
IN West, Jennifer L, Pearland, TX, UNITED STATES
Masters, Kristyn Simcha, Northglenn, CO, UNITED STATES
PI US 2003012816 A1 20030116
AI US 2002-129418 A1 20020517 (10)
WO 2001-US27414 20010904
PRAI US 2000-9653406 20000901
DT Utility
FS APPLICATION
LREP JOHN S. PRATT, ESQ, KILPATRICK STOCKTON, LLP, 1100 PEACHTREE STREET,
SUITE 2800, ATLANTA, GA, 30309
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 20 Drawing Page(s)
LN.CNT 1500
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Hydrogels** releasing or producing NO, most preferably **polymerizable biodegradable hydrogels** capable of releasing physiological amounts of NO for prolonged periods of time, are applied to sites on or in a patient in need of treatment thereof for disorders such as restenosis, thrombosis, asthma, wound healing, arthritis, penile erectile dysfunction or other conditions where NO plays a significant role. The **polymeric** materials can be formed into films, coatings, or microparticles for application to medical devices, such as stents, vascular grafts and catheters. The **polymeric** materials can also be applied directly to biological tissues and can be **polymerized** in situ. The **hydrogels** are formed of macromers, which preferably include biodegradable regions, and have bound thereto groups that are released in situ to elevate or otherwise modulate NO levels at the site where treatment is needed. The macromers can form a homo or hetero-dispersion or solution, which is **polymerized** to form a **hydrogel** material, that in the latter case can be a semi-interpenetrating network or interpenetrating network. Compounds to be released can be physically entrapped, covalently or ionically bound to macromer, or actually form a part of the **polymeric** material. The **hydrogel** can be formed by ionic and/or covalent **crosslinking**. Other active agents, including therapeutic, prophylactic, or diagnostic agents, can also be included within the **polymeric** material.

L10 ANSWER 3 OF 10 USPATFULL on STN
AN 2003:16986 USPATFULL
TI **Biocompatible crosslinked polymers**
IN Pathak, Chandrashekhar P., Austin, TX, UNITED STATES
Sawhney, Amarpreet S., Lexington, MA, UNITED STATES
Edelman, Peter G., Franklin, MA, UNITED STATES
PA Incept LLC. (U.S. corporation)
PI US 2003012734 A1 20030116
AI US 2001-10715 A1 20011109 (10)
RLI Continuation-in-part of Ser. No. US 1999-147897, filed on 30 Aug 1999, PENDING A 371 of International Ser. No. WO 1997-US16897, filed on 22 Sep 1997, UNKNOWN Continuation-in-part of Ser. No. US 1999-454900, filed on 3 Dec 1999, PENDING
PRAI US 1996-26526P 19960923 (60)
US 1997-39904P 19970304 (60)
US 1997-40417P 19970313 (60)
US 1998-110849P 19981204 (60)
DT Utility

FS APPLICATION
LREP PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A., 4800 IDS CENTER, 80 SOUTH
8TH STREET, MINNEAPOLIS, MN, 55402-2100
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 10 Drawing Page(s)
LN.CNT 2234

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biocompatible crosslinked polymers**, and methods for their preparation and use, are disclosed in which the **biocompatible crosslinked polymers** are formed from **water** soluble precursors having electrophilic and nucleophilic functional groups capable of reacting and **crosslinking** in situ. Methods for making the resulting **biocompatible crosslinked polymers** biodegradable or not are provided, as are methods for controlling the rate of degradation. The **crosslinking** reactions may be carried out in situ on organs or tissues or outside the body. Applications for such **biocompatible crosslinked polymers** and their precursors include controlled delivery of drugs, prevention of post-operative adhesions, coating of medical devices such as vascular grafts, wound dressings and surgical sealants. Visualization agents may be included with the **crosslinked polymers**.

L10 ANSWER 4 OF 10 USPATFULL on STN

AN 2002:172469 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers

IN Hubbell, Jeffrey A., Zumikon, SWITZERLAND

Pathak, Chandrashekhar P., Austin, TX, UNITED STATES

Sawhney, Amarpreet S., Lexington, MA, UNITED STATES

Desai, Neil P., Los Angeles, CA, UNITED STATES

Hill, Jennifer L., Pearland, TX, UNITED STATES

PA Board of Regents, The University of Texas System Texas (non-U.S. corporation)

PI US 2002091229 A1 20020711

US 6602975 B2 20030805

AI US 2001-21508 A1 20011022 (10)

RLI Continuation of Ser. No. US 2000-492011, filed on 26 Jan 2000, PATENTED
Continuation of Ser. No. US 1998-128917, filed on 4 Aug 1998, PATENTED
Continuation of Ser. No. US 1996-700237, filed on 20 Aug 1996, PATENTED
Division of Ser. No. US 1995-468364, filed on 6 Jun 1995, PATENTED
Division of Ser. No. US 1995-379848, filed on 27 Jan 1995, PATENTED
Division of Ser. No. US 1993-22687, filed on 1 Mar 1993, PATENTED
Continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, ABANDONED

DT Utility

FS APPLICATION

LREP PATREA L. PABST, HOLLAND & KNIGHT LLP, SUITE 2000, ONE ATLANTIC CENTER,
1201 WEST PEACHTREE STREET, N.E., ATLANTA, GA, 30309-3400

CLMN Number of Claims: 31

ECL Exemplary Claim: 1

DRWN 5 Drawing Page(s)

LN.CNT 1817

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages

within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L10 ANSWER 5 OF 10 USPATFULL on STN
AN 2001:185356 USPATFULL
TI **Photopolymerizable biodegradable hydrogels**
as tissue contacting materials and controlled-release carriers
IN Hubbell, Jeffrey A., Austin, TX, United States
Pathak, Chandrashekhar P., Waltham, MA, United States
Sawhney, Amarpreet S., Newton, MA, United States
Desai, Neil P., Los Angeles, CA, United States
Hill, Jennifer L., Austin, TX, United States
PA Boards of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6306922 B1 20011023
AI US 2000-492011 20000126 (9)
RLI Continuation of Ser. No. US 1998-128917, filed on 4 Aug 1998, now patented, Pat. No. US 6060582 Continuation of Ser. No. US 1996-700237, filed on 20 Aug 1996, now patented, Pat. No. US 5986043 Division of Ser. No. US 1995-468364, filed on 6 Jun 1995, now patented, Pat. No. US 5567435 Division of Ser. No. US 1995-379848, filed on 27 Jan 1995, now patented, Pat. No. US 5626863 Division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 Continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Hampton-Hightower, P.
LREP Holland & Knight LLP
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2166
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Hydrogels of polymerized and crosslinked**
macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L10 ANSWER 6 OF 10 USPATFULL on STN
AN 2000:57876 USPATFULL
TI **Photopolymerizable biodegradable hydrogels**
as tissue contacting materials and controlled-release carriers
IN Hubbell, Jeffrey A., Austin, TX, United States
Pathak, Chandrashekhar P., Waltham, MA, United States
Sawhney, Amarpreet S., Newton, MA, United States
Desai, Neil P., Los Angeles, CA, United States
Hill-West, Jennifer L., Austin, TX, United States

PA The Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6060582 20000509
AI US 1998-128917 19980804 (9)
RLI Continuation of Ser. No. US 1996-700237, filed on 20 Aug 1996 which is a division of Ser. No. US 1995-468364, filed on 6 Jun 1995, now patented, Pat. No. US 5567435 which is a division of Ser. No. US 1995-379848, filed on 27 Jan 1995, now patented, Pat. No. US 5626863 which is a division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Hampton-Hightower, P.
LREP Arnall Golden & Gregory, LLP
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2334

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L10 ANSWER 7 OF 10 USPATFULL on STN

AN 1999:146742 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers

IN Hubbell, Jeffrey A., Austin, TX, United States

Pathak, Chandrashekhar P., Waltham, MA, United States

Sawhney, Amarpreet S., Newton, MA, United States

Desai, Neil P., Los Angeles, CA, United States

Hill-West, Jennifer L., Austin, TX, United States

PA Board of Regents, The University of Texas System, United States (U.S. corporation)

PI US 5986043 19991116

AI US 1996-700237 19960820 (8)

RLI Division of Ser. No. US 1995-468364, filed on 6 Jun 1995, now patented, Pat. No. US 5567435 which is a division of Ser. No. US 1995-379848, filed on 27 Jan 1995, now patented, Pat. No. US 5626863 which is a division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Hampton-Hightower, P.

LREP Arnall Golden & Gregory, LLP

CLMN Number of Claims: 42

ECL Exemplary Claim: 1

DRWN 13 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 1925

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L10 ANSWER 8 OF 10 USPATFULL on STN

AN 97:38209 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers

IN Hubbell, Jeffrey A., Austin, TX, United States

Pathak, Chandrashekhar P., Waltham, MA, United States

Sawhney, Amarpreet S., Newton, MA, United States

Desai, Neil P., Los Angeles, CA, United States

Hill, Jennifer L., Austin, TX, United States

PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)

PI US 5626863 19970506

AI US 1995-379848 19950127 (8)

RLI Division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Dodson, Shelley A.

LREP Pabst, Patrea L.

CLMN Number of Claims: 43

ECL Exemplary Claim: 1

DRWN 13 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 2322

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L10 ANSWER 9 OF 10 USPATFULL on STN

AN 96:96779 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers
IN Hubbell, Jeffrey A., Austin, TX, United States
Pathak, Chandrashekhar P., Waltham, MA, United States
Sawhney, Amarpreet S., Newton, MA, United States
Desai, Neil P., Los Angeles, CA, United States
Hill-West, Jennifer L., Austin, TX, United States
PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 5567435 19961022
AI US 1995-468364 19950606 (8)
RLI Division of Ser. No. US 1995-379848, filed on 27 Jan 1995 which is a division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Dodson, Shelley A.
LREP Arnall Golden & Gregory
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 2186

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L10 ANSWER 10 OF 10 USPATFULL on STN

AN 95:36490 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers

IN Hubbell, Jeffrey A., Austin, TX, United States
Pathak, Chandrashekhar P., Waltham, MA, United States
Sawhney, Amarpreet S., Newton, MA, United States
Desai, Neil P., Los Angeles, CA, United States
Hill, Jennifer L., Austin, TX, United States

PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)

PI US 5410016 19950425

AI US 1993-22687 19930301 (8)

RLI Continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned Ser. No. Ser. No. US 1990-598880, filed on 15 Oct 1990 And Ser. No. US 1991-740703, filed on 5 Aug 1991 which is a division of Ser. No. US -598880

DT Utility

FS Granted

EXNAM Primary Examiner: Foelak, Morton; Assistant Examiner: Dodson, Shelley A.

LREP Kilpatrick & Cody

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN 13 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 2205

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels** of **polymerized** and **crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

=> s Pathak, C?/au

L12 444 PATHAK, C?/AU

=> s Sawhney, A?/au

L13 398 SAWHNEY, A?/AU

=> s Edelman, P?/au

L14 336 EDELMAN, P?/AU

=> s l7 and (l12 or l13 or l14)

L15 22 L7 AND (L12 OR L13 OR L14)

=> s l10 and (l12 or l13 or l14)

L16 9 L10 AND (L12 OR L13 OR L14)

=> s l15 and l16

L17 9 L15 AND L16

=> d l17 1-9 bib ab

L17 ANSWER 1 OF 9 USPATFULL on STN

AN 2003:127770 USPATFULL

TI Gels for encapsulation of biological materials

IN Hubbell, Jeffrey A., San Marino, CA, UNITED STATES

Pathak, Chandrashekhar P., Lexington, MA, UNITED STATES

Sawhney, Amarpreet S., Lexington, MA, UNITED STATES

 Desai, Neil P., Los Angeles, CA, UNITED STATES

 Hossainy, Syed F.A., San Carlos, CA, UNITED STATES

 Hill-West, Jennifer L., Pasadena, CA, UNITED STATES

PI US 2003087985 A1 20030508

AI US 2001-910663 A1 20010719 (9)

RLI Continuation of Ser. No. US 1995-510089, filed on 1 Aug 1995, ABANDONED
Continuation-in-part of Ser. No. US 1992-958870, filed on 7 Oct 1992,
GRANTED, Pat. No. US 5529914 Continuation-in-part of Ser. No. US
1992-870540, filed on 20 Apr 1992, ABANDONED Continuation-in-part of
Ser. No. US 1995-379848, filed on 27 Jan 1995, GRANTED, Pat. No. US
5626863 Continuation of Ser. No. US 1993-22687, filed on 1 Mar 1993,
GRANTED, Pat. No. US 5410016 Continuation-in-part of Ser. No. US
1992-843485, filed on 28 Feb 1992, ABANDONED Continuation-in-part of
Ser. No. US 1994-336393, filed on 10 Nov 1994, GRANTED, Pat. No. US
5820882 Continuation of Ser. No. US 1990-598880, filed on 15 Oct 1990,
ABANDONED

DT Utility

FS APPLICATION

LREP LYON & LYON LLP, 633 WEST FIFTH STREET, SUITE 4700, LOS ANGELES, CA,
90071

CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 22 Drawing Page(s)
LN.CNT 3246

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention provides novel methods for the formation of **biocompatible** membranes around biological materials using **photopolymerization** of **water** soluble molecules. The membranes can be used as a covering to encapsulate biological materials or biomedical devices, as a "glue" to cause more than one biological substance to adhere together, or as carriers for biologically active species.

Several methods for forming these membranes are provided. Each of these methods utilizes a **polymerization** system containing **water**-soluble macromers, species which are at once **polymers** and macromolecules capable of further **polymerization**. The macromers are **polymerized** using a photoinitiator (such as a **dye**), optionally a cocatalyst, optionally an accelerator, and radiation in the form of visible or long wavelength UV light. The reaction occurs either by suspension **polymerization** or by interfacial **polymerization**. The **polymer** membrane can be formed directly on the surface of the biological material, or it can be formed on material which is already encapsulated.

L17 ANSWER 2 OF 9 USPATFULL on STN

AN 2003:16986 USPATFULL

TI **Biocompatible crosslinked polymers**

IN **Pathak, Chandrashekhar P.**, Austin, TX, UNITED STATES

Sawhney, Amarpreet S., Lexington, MA, UNITED STATES

Edelman, Peter G., Franklin, MA, UNITED STATES

PA Incept LLC. (U.S. corporation)

PI US 2003012734 A1 20030116

AI US 2001-10715 A1 20011109 (10)

RLI Continuation-in-part of Ser. No. US 1999-147897, filed on 30 Aug 1999, PENDING A 371 of International Ser. No. WO 1997-US16897, filed on 22 Sep 1997, UNKNOWN Continuation-in-part of Ser. No. US 1999-454900, filed on 3 Dec 1999, PENDING

PRAI US 1996-26526P 19960923 (60)

US 1997-39904P 19970304 (60)

US 1997-40417P 19970313 (60)

US 1998-110849P 19981204 (60)

DT Utility

FS APPLICATION

LREP PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A., 4800 IDS CENTER, 80 SOUTH 8TH STREET, MINNEAPOLIS, MN, 55402-2100

CLMN Number of Claims: 35

ECL Exemplary Claim: 1

DRWN 10 Drawing Page(s)

LN.CNT 2234

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biocompatible crosslinked polymers**, and methods for their preparation and use, are disclosed in which the **biocompatible crosslinked polymers** are formed from **water** soluble precursors having electrophilic and nucleophilic functional groups capable of reacting and **crosslinking** in situ. Methods for making the resulting **biocompatible crosslinked polymers** biodegradable or not are provided, as are methods for controlling the rate of degradation. The **crosslinking** reactions may be carried out in situ on organs or tissues or outside the body. Applications for such **biocompatible crosslinked polymers** and their precursors include controlled delivery of drugs, prevention of post-operative adhesions, coating of medical devices such as vascular

grafts, wound dressings and surgical sealants. Visualization agents may be included with the **crosslinked polymers**.

L17 ANSWER 3 OF 9 USPATFULL on STN
AN 2002:172469 USPATFULL
TI **Photopolymerizable biodegradable hydrogels**
as tissue contacting materials and controlled-release carriers
IN Hubbell, Jeffrey A., Zumikon, SWITZERLAND
Pathak, Chandrashekhar P., Austin, TX, UNITED STATES
Sawhney, Amarpreet S., Lexington, MA, UNITED STATES
Desai, Neil P., Los Angeles, CA, UNITED STATES
Hill, Jennifer L., Pearland, TX, UNITED STATES
PA Board of Regents, The University of Texas System Texas (non-U.S. corporation)
PI US 2002091229 A1 20020711
US 6602975 B2 20030805
AI US 2001-21508 A1 20011022 (10)
RLI Continuation of Ser. No. US 2000-492011, filed on 26 Jan 2000, PATENTED
Continuation of Ser. No. US 1998-128917, filed on 4 Aug 1998, PATENTED
Continuation of Ser. No. US 1996-700237, filed on 20 Aug 1996, PATENTED
Division of Ser. No. US 1995-468364, filed on 6 Jun 1995, PATENTED
Division of Ser. No. US 1995-379848, filed on 27 Jan 1995, PATENTED
Division of Ser. No. US 1993-22687, filed on 1 Mar 1993, PATENTED
Continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, ABANDONED
DT Utility
FS APPLICATION
LREP PATREA L. PABST, HOLLAND & KNIGHT LLP, SUITE 2000, ONE ATLANTIC CENTER, 1201 WEST PEACHTREE STREET, N.E., ATLANTA, GA, 30309-3400
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 1817
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization and cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L17 ANSWER 4 OF 9 USPATFULL on STN
AN 2001:185356 USPATFULL
TI **Photopolymerizable biodegradable hydrogels**
as tissue contacting materials and controlled-release carriers
IN Hubbell, Jeffrey A., Austin, TX, United States
Pathak, Chandrashekhar P., Waltham, MA, United States
Sawhney, Amarpreet S., Newton, MA, United States
Desai, Neil P., Los Angeles, CA, United States
Hill, Jennifer L., Austin, TX, United States
PA Boards of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
PI US 6306922 B1 20011023
AI US 2000-492011 20000126 (9)

RLI Continuation of Ser. No. US 1998-128917, filed on 4 Aug 1998, now patented, Pat. No. US 6060582 Continuation of Ser. No. US 1996-700237, filed on 20 Aug 1996, now patented, Pat. No. US 5986043 Division of Ser. No. US 1995-468364, filed on 6 Jun 1995, now patented, Pat. No. US 5567435 Division of Ser. No. US 1995-379848, filed on 27 Jan 1995, now patented, Pat. No. US 5626863 Division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 Continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned

DT Utility

FS GRANTED

EXNAM Primary Examiner: Hampton-Hightower, P.

LREP Holland & Knight LLP

CLMN Number of Claims: 8

ECL Exemplary Claim: 1

DRWN 7 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 2166

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L17 ANSWER 5 OF 9 USPATFULL on STN

AN 2000:57876 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers

IN Hubbell, Jeffrey A., Austin, TX, United States

Pathak, Chandrashekhar P., Waltham, MA, United States

Sawhney, Amarpreet S., Newton, MA, United States

Desai, Neil P., Los Angeles, CA, United States

Hill-West, Jennifer L., Austin, TX, United States

PA The Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)

PI US 6060582 20000509

AI US 1998-128917 19980804 (9)

RLI Continuation of Ser. No. US 1996-700237, filed on 20 Aug 1996 which is a division of Ser. No. US 1995-468364, filed on 6 Jun 1995, now patented, Pat. No. US 5567435 which is a division of Ser. No. US 1995-379848, filed on 27 Jan 1995, now patented, Pat. No. US 5626863 which is a division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Hampton-Hightower, P.

LREP Arnall Golden & Gregory, LLP

CLMN Number of Claims: 17

ECL Exemplary Claim: 1

DRWN 7 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 2334

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked**

macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L17 ANSWER 6 OF 9 USPATFULL on STN
AN 1999:146742 USPATFULL
TI **Photopolymerizable biodegradable hydrogels**
as tissue contacting materials and controlled-release carriers
IN Hubbell, Jeffrey A., Austin, TX, United States
Pathak, Chandrashekhar P., Waltham, MA, United States
Sawhney, Amarpreet S., Newton, MA, United States
Desai, Neil P., Los Angeles, CA, United States
Hill-West, Jennifer L., Austin, TX, United States
PA Board of Regents, The University of Texas System, United States (U.S. corporation)
PI US 5986043 19991116
AI US 1996-700237 19960820 (8)
RLI Division of Ser. No. US 1995-468364, filed on 6 Jun 1995, now patented, Pat. No. US 5567435 which is a division of Ser. No. US 1995-379848, filed on 27 Jan 1995, now patented, Pat. No. US 5626863 which is a division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Hampton-Hightower, P.
LREP Arnall Golden & Gregory, LLP
CLMN Number of Claims: 42
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1925
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked**
macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L17 ANSWER 7 OF 9 USPATFULL on STN
AN 97:38209 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**
 as tissue contacting materials and controlled-release carriers
 IN Hubbell, Jeffrey A., Austin, TX, United States
 Pathak, Chandrashekhar P., Waltham, MA, United States
 Sawhney, Amarpreet S., Newton, MA, United States
 Desai, Neil P., Los Angeles, CA, United States
 Hill, Jennifer L., Austin, TX, United States
 PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
 PI US 5626863 19970506
 AI US 1995-379848 19950127 (8)
 RLI Division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Dodson, Shelley A.
 LREP Pabst, Patrea L.
 CLMN Number of Claims: 43
 ECL Exemplary Claim: 1
 DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
 LN.CNT 2322
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB **Hydrogels of polymerized and crosslinked**
 macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

 L17 ANSWER 8 OF 9 USPATFULL on STN
 AN 96:96779 USPATFULL
 TI **Photopolymerizable biodegradable hydrogels**
 as tissue contacting materials and controlled-release carriers
 IN Hubbell, Jeffrey A., Austin, TX, United States
 Pathak, Chandrashekhar P., Waltham, MA, United States
 Sawhney, Amarpreet S., Newton, MA, United States
 Desai, Neil P., Los Angeles, CA, United States
 Hill-West, Jennifer L., Austin, TX, United States
 PA Board of Regents, The University of Texas System, Austin, TX, United States (U.S. corporation)
 PI US 5567435 19961022
 AI US 1995-468364 19950606 (8)
 RLI Division of Ser. No. US 1995-379848, filed on 27 Jan 1995 which is a division of Ser. No. US 1993-22687, filed on 1 Mar 1993, now patented, Pat. No. US 5410016 which is a continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned
 DT Utility
 FS Granted
 EXNAM Primary Examiner: Dodson, Shelley A.
 LREP Arnall Golden & Gregory
 CLMN Number of Claims: 38
 ECL Exemplary Claim: 1
 DRWN 13 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 2186

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

L17 ANSWER 9 OF 9 USPATFULL on STN

AN 95:36490 USPATFULL

TI **Photopolymerizable biodegradable hydrogels**

as tissue contacting materials and controlled-release carriers

IN Hubbell, Jeffrey A., Austin, TX, United States

Pathak, Chandrashekhar P., Waltham, MA, United States

Sawhney, Amarpreet S., Newton, MA, United States

Desai, Neil P., Los Angeles, CA, United States

Hill, Jennifer L., Austin, TX, United States

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PI US 5410016 19950425

AI US 1993-22687 19930301 (8)

RLI Continuation-in-part of Ser. No. US 1992-843485, filed on 28 Feb 1992, now abandoned Ser. No. US 1990-598880, filed on 15 Oct 1990 And Ser. No. US 1991-740703, filed on 5 Aug 1991 which is a division of Ser. No. US -598880

DT Utility

FS Granted

EXNAM Primary Examiner: Foelak, Morton; Assistant Examiner: Dodson, Shelley A.

LREP Kilpatrick & Cody

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN 13 Drawing Figure(s); 9 Drawing Page(s)

LN.CNT 2205

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Hydrogels of polymerized and crosslinked** macromers comprising **hydrophilic** oligomers having biodegradable monomeric or oligomeric extensions, which biodegradable extensions are terminated on free ends with end cap monomers or oligomers capable of **polymerization** and **cross linking** are described. The **hydrophilic** core itself may be degradable, thus combining the core and extension functions. Macromers are **polymerized** using free radical initiators under the influence of long wavelength ultraviolet light, visible light excitation or thermal energy. Biodegradation occurs at the linkages within the extension oligomers and results in fragments which are non-toxic and easily removed from the body. Preferred applications for the **hydrogels** include prevention of adhesion formation after surgical procedures, controlled release of drugs and other bioactive species, temporary protection or separation of tissue surfaces, adhering of sealing tissues together, and preventing the attachment of cells to tissue surfaces.

=> s 117 and (kit or packaged device)
L18 1 L17 AND (KIT OR PACKAGED DEVICE)

=> d 118 bib ab

L18 ANSWER 1 OF 1 USPATFULL on STN
AN 2003:16986 USPATFULL
TI **Biocompatible crosslinked polymers**
IN **Pathak, Chandrashekhar P.**, Austin, TX, UNITED STATES
Sawhney, Amarpreet S., Lexington, MA, UNITED STATES
Edelman, Peter G., Franklin, MA, UNITED STATES
PA Incept LLC. (U.S. corporation)
PI US 2003012734 A1 20030116
AI US 2001-10715 A1 20011109 (10)
RLI Continuation-in-part of Ser. No. US 1999-147897, filed on 30 Aug 1999,
PENDING A 371 of International Ser. No. WO 1997-US16897, filed on 22 Sep
1997, UNKNOWN Continuation-in-part of Ser. No. US 1999-454900, filed on
3 Dec 1999, PENDING
PRAI US 1996-26526P 19960923 (60)
US 1997-39904P 19970304 (60)
US 1997-40417P 19970313 (60)
US 1998-110849P 19981204 (60)
DT Utility
FS APPLICATION
LREP PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A., 4800 IDS CENTER, 80 SOUTH
8TH STREET, MINNEAPOLIS, MN, 55402-2100
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 10 Drawing Page(s)
LN.CNT 2234

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Biocompatible crosslinked polymers**, and
methods for their preparation and use, are disclosed in which the
biocompatible crosslinked polymers are
formed from **water** soluble precursors having electrophilic and
nucleophilic functional groups capable of reacting and
crosslinking in situ. Methods for making the resulting
biocompatible crosslinked polymers
biodegradable or not are provided, as are methods for controlling the
rate of degradation. The **crosslinking** reactions may be carried
out in situ on organs or tissues or outside the body. Applications for
such **biocompatible crosslinked polymers**
and their precursors include controlled delivery of drugs, prevention of
post-operative adhesions, coating of medical devices such as vascular
grafts, wound dressings and surgical sealants. Visualization agents may
be included with the **crosslinked polymers**.

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